

REMARKS

Favorable reconsideration and allowance of the present application are requested.

The Examiner will observe that the present amendment is being filed concurrently with a formal Request for Continuing Examination (RCE) pursuant to Rule 114. Accordingly, entry of the present amendment and reconsideration in view of the remarks which follow are solicited during such continued examination.

By way of the amendment instructions above, claims 53, 55, 58 and 59 have been amended so as to clarify the same.

Claims 66 and 67 are new and depend from claims 53 and 58, respectively. Claims 66 and 67 require the composite material to further comprise a particulate thermally conductive material. Support for such language may be found in the originally filed specification at page 6, lines 24-29.

Therefore, following entry of the subject amendment, Claims 53-61 and 64-67 will be pending herein for which favorable reconsideration and allowance are solicited.

I. Response to 35 USC §112 Rejection

As best understood, the rejections advanced claims 55 and 59 under 35 USC §112, second paragraph, have been repeated with respect to the language regarding the directions of the rovings as noted therein. In response, claims 55 and 59 have been revised so as to clarify that the additional layers are external of the monolithic wall. Moreover, claims 55 and 59 have been clarified to the extent that, for any particular one of the layers, the direction of the rovings extend substantially in a common direction which is different from the common direction of any adjacent layer. and that the common direction is in each one of the layers selected from a direction extending

spirally around the tube axis and a direction extending longitudinally in a lengthwise direction **parallel** to the tube axis.

The direction of a roving **parallel** to the tube axis is clearly mutually exclusive to the direction of a roving which is **spiral** relative to the tube axis. That is, the spiral wound tube, while perhaps arguably having a component which is "longitudinal" relative to the tube axis does **not** have a component which is parallel to the tube axis.

It is suggested therefore, that claims 55 and 59 fully comply with the statutory requirements of 35 USC §112, second paragraph. Withdrawal of the rejections advanced thereagainst is in order.

II. Response to Art-Based Rejections

Claims 53-56 and 58-60 remain rejected under 35 USC §103(a) as allegedly obvious from Swozil et al of record. In addition, previously presented claims 64 and 65 have been rejected under the same statutory section as allegedly obvious from Swozil et al in view of O'Connor. Applicants again submit that all claims pending herein are allowable over the applied references of record.

Applicants again reiterate that the wall of Swozil et al does not, as the Examiner asserts, "define a hollow interior." Specifically, the fiber layer of Swozil et al is coated around a tube body to form a temperature and corrosion-resistant layer on the tube body. (See column 1 lines 57 to 65). Thus, such fibrous corrosion resistant layer **covers** the tube and, as such, does not "define" the hollow interior.

A definition of "define" in the American Heritage Dictionary of the English Language pertinent to the present situation is "to delineate the outline or form of." Since the fibrous corrosion-resistant layer of Swozil et al **covers** the tube, it cannot therefore "delineate the outline" of the hollow interior. Instead, it is the tube per se which defines the hollow interior.

Notwithstanding what applicants perceive as an erroneous interpretation of the claim language at issue here, the language of claims 53 and 58 has been clarified such that the monolithic wall of the present invention *determines* the boundary of the hollow interior. Thus, for the reasons of record on this issue, applicants suggest that Swozil et al is inappropriate as a reference against the presently pending claims.

Applicants also note that Swozil et al does not disclose a "matrix" as that term is understood by those in this art. Thus, the "matrix" material is the resinous phase of a reinforced plastic material in which the fibers or filaments of a composite are embedded. Moreover, a matrix material serves to spread the load applied to the composite between each of the individual fibers and also protects the fibers from damage caused by abrasion and impact. See, <http://www.netcomposites.com/education.asp?sequence=3>. The fibrous corrosion resistant layer of Swozil et al which covers the tube therefore does not comprise at all a "matrix" in which fiber rovings are embedded as defined by the applicants' claims herein.

The combination of O'Connor (USP 4,800,113) and Swozil et al to reject claims 65 and 66 is also in appropriate. In this regard, applicants are not claiming to be the first inventors of blending particulate metal with a plastics material generally. Instead, applicants are claiming incorporating metal particulates in combination with glass fiber rovings for the purpose of achieving desired heat conductivity properties in the context of a heat transfer tube as claimed herein. Thus, one of ordinary skill in this art would not be given any guidance in that regard from O'Connor. Moreover, even if O'Connor directed an ordinarily skilled person to combine particulate metal with the glass fibers of Swozil et al, the present invention would not result for the reasons stated above and previously on the record.


DODD et al
Serial No. 09/890,860
May 18, 2005

Withdrawal of all rejections advanced under 35 USC §103(a) is therefore in order. Such favorable action is solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Bryan H. Davidson
Reg. No. 30,251

BHD:Imy
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100